

Reference is now made to FIG. 3 which is a block diagram of a remote data center operable in conjunction with the remote settable meter 12 shown in FIG. 1. The data center 40 receives the authorization code generated by postage meter 12 and transmitted by the user such as by use of a tone generator type telephone. The authorization code is applied via a receiver 42 to a decoder and verifier 44.

The decoder and verifier 44 decodes the authorization code to generate the reset count and, for example, the descending register amount for postage meter 12. The decoder further verifies the CRC to insure that the data has been accurately transmitted and additionally to provide a level of verification that the user has had physical access to the meter being reset. This is because a user who determines the reset count and the descending register amount for a particular meter would not, have sufficient information to access the data center; still needing to determine the signal processing in the encoder and CRC generator.

It should be noted that further security can be provided by applying the authorization code to an encrypter 21 (FIG. 2) prior to display on the postage meter display 22 and thus, prior transmission by the postage meter user. If this occurs, the encrypted authorization code, as is shown in FIG. 4, would be decrypted in a decryption circuit 46.

Referring again to FIG. 3, if the decoder and verifier 44 verifies the accuracy of the transmission (the CRC is correct), the reset count signal is generated and applied to a comparator 46 wherein the decoded reset count signal is compared to the reset count signal stored at the data center. The decoded descending register amount signal is applied to an adder 49 with the reset amount signal from receiver 42 which is also provided to the data center by the user. If the sum of the descending register and reset amount exceeds the amount of postage capable of being stored in the postage meter, the reset operation is inhibited. This information may be communicated back to the user via a voice generating means 51.

If the stored reset count signal and the decoded reset count signal compare correctly, the comparator 46 enables an adder circuit 49 coupled to the control sum storage register 50 to provide the current control sum associated with postage meter 12 to a physically sealed unit 52 and to add the reset amount to the control sum storage register. The physically sealed unit 52 is sealed in a manner to prevent access to the circuitry by data center personnel. The sealed unit, which will be described in greater detail hereinafter, results in an enhanced security for the remote meter resetting system because the data center personnel do not have access to the encryption circuit and certain unencrypted data associated with the resetting of the meter 12.

The control sum register 50 signal is applied to an encrypter 54 within sealed unit 52 as is the user entered reset amount signal from receiver 42. Additionally applied to the encrypter 54 are unencrypted seed number signals. The encrypter 54 may be any one of a large number of encrypting devices such as those employing the data encryption standard previously identified. However, it should be noted that encryption device 54 is identical in its operation to the encryption device 24 in postage meter 12.

The seed number signal applied to the encrypter 54 is stored in the data center so that it may be accessible by data center personnel. However, the seed number signal

is stored in an encrypted form in encrypted seed storage 56. This is the only form of the seed signal to which data center personnel have access. The encrypted seed signal from storage 56 is applied to a decryption device 58 which need not be similar to or compatible with the form of encryption provided by encrypter 54 and encryptor 24 in the postage meter 12. The decryption device 58 which again may be any one of the large number of devices functions to decrypt the encrypted seed number signal and to provide an unencrypted, clear seed number signal which is the same as the seed number signal stored in the seed storage 26 postage meter 12. The encrypter 54 generates an encrypted output signal which is applied to a signal splitter circuit 60. The splitter circuit 60 splits the encrypted output signal from encrypter 54 into a first part which is transmitted via the voice generator means 51 to the postage meter user. The voice transmitted combination is the combination which is entered by the user and applied to the comparator 28 in FIG. 1.

The splitter circuit 60 additionally applies part of the encrypted output signal from encryptor 54 to a second encrypter 62 to generate a new encrypted seed number signal. Encrypter 62 encrypts the seed number signal in a manner so that it is compatible with the decryptor 58. The new encrypted seed number signal for postage meter 12 is transmitted from within the sealed unit 12 to the encrypted seed storage 56 which is accessible to the data center personnel.

Reference is now made to FIG. 4 which shows the use of a mixer 64 located within the sealed unit 52. In this embodiment, the mixer 64 provides a further enhanced security, similar to mixer 30 provided in postage meter 12. If a mixer 30 is provided in the postage meter 12, a like mixer 64 must be provided at the data center.

What is claimed is:

1. A data center for a remote postage meter recharging system of the type adapted recharge remotely located postage meters, each of said postage meters having signal information stored therein for use in recharging said postage meter with additional postage, comprising:

means for receiving resetting signal information associated with a selected one of said remotely located postage meters;

means coupled to said receiving means for processing said resetting information;

means for storing encrypted signal information equivalent to said signal information stored in each of said postage meters; and

sealed unit means coupled to said resetting signal information processing means and to said means for storing encrypted signal information for processing received resetting signal information and stored encrypted signal information to generate a signal for use in resetting said selected one of said remotely located meters.

2. A data center for a remote postage meter recharging system as defined in claim 1 wherein said sealed unit means includes a first encrypter coupled to said means for processing said resetting information.

3. A data center for a remote postage meter recharging system, comprising:

means for receiving resetting signal information;

means coupled to said receiving means for processing said resetting information;

means for storing encrypted signal information;

and